

DRAFT FINAL REPORT

**THE MONITORING AND MITIGATION OF IMPACTS
TO PROTECTED SPECIES DURING DREDGING
AT THE KINGS BAY ENTRANCE CHANNEL**

MANSON CONSTRUCTION

***Dredge Glenn Edwards
Dredge Bayport***

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INTRODUCTION

Coastwise Consulting, Incorporated (CCI) provided monitoring of protected sea turtle and cetacean species during the dredging operations conducted by Manson Construction Company at the Kings Bay Naval Submarine Entrance Channel. The sea turtle species that could be encountered in this area during the winter include the loggerhead (*Caretta caretta*), the Kemp's ridley (*Lepidochelys kempi*) and the green (*Chelonia mydas*). The cetacean species likely to be encountered include the bottlenose dolphin (*Tursiops truncatus*) and the right whale (*Eubalaena glacialis*).

Hopper dredging was closely monitored for indications that any of the listed species were impacted. This was aided by the fact that Manson dredges are equipped are effectively screened. The operators of the dredge and the support vessels were thoroughly briefed on right whale behavior and biology, as well as, the mandated modes of vessel/dredge operation when right whales were sighted within 15 nautical miles of the project area.

The dredge *Glenn Edwards* worked at Kings Bay from 02/06/07 and the dredge *Bayport* worked at Kings Bay from 03/07/07 – 03/19/07. During the course of this 26 day project (13 + 13), all 84 loads were monitored. One turtle, a loggerhead, was taken.

There were 5 sightings of right whales.

METHODS

During dredging operations endangered species observers, approved by the National Marine Fisheries Service, provided twenty-four hour monitoring of impacts to endangered and protected species, particularly sea turtles and whales, onboard the Manson hopper dredges *Glenn Edwards* and *Bayport*.

Rigid turtle deflectors were installed on the dragheads before work began and all points of inflow were screened before the observers board the dredge. Inflow occurs on the Manson dredges at the end of the discharge pipes which empty into the hopper. Cages are attached directly to the ends of the discharge pipes and are constructed of steel bar-stock, welded in a grid pattern, with openings of approximately 4" x 4". Observers gain access into the top of these cages through hinged trap doors. The walls of the cages are hinged and can be opened by hydraulic rams in order to clear the cages of debris after inspection by observers.

Observers cleaned and inspected this screening, around-the-clock, in order to document any evidence of turtle take. Before cleaning and inspecting the screens, the observers checked the dragheads and turtle deflectors. Load sheets were completed at the end of each load cycle, detailing everything found in the screening or the dragheads, as well as the condition of the screens and the deflectors. Also recorded was the start, end and pump times for each load, the specific location of the dredging area, the type of material being dredged, weather, tide and water temperature data (surface and mid-depth), and any other pertinent information.

Observers maintained a bridge watch for protected species and noted all sightings of turtles and marine mammals. All sightings were summarized on the Daily Reports. Sightings data included date, time, location, species, number of animals, distance and bearing from dredge, direction of travel and any other information available. Daily Reports and Weekly Summaries were filed with Manson.

RESULTS

One turtle take, a loggerhead (*Caretta caretta*) was taken by the dredge *Bayport* on 03/16/07. See attached Tables

Five sightings of right whales were documented by the *Glenn Edwards*. See attached Tables. The Bayport worked primarily inshore and pumped onto the beach from a hook-up between the jetties. This accounts for the lack of sightings from that vessel.

Jacksonville

District					Surface Temp		Dredge	Turtle	
Kings Bay	Dredge	Year	Start	End	Range (° C)	Load #s	Days	Takes	Comments
	<i>Glenn Edwards</i>	2007	02/06/07	02/18/07	13	41	13	-	100% coverage
	<i>Bayport</i>	2007	03/08/07	03/19/07	15.5 - 18.2 - 16.6	43	12	1 Cc	100% coverage

	Dredge	Load	Start	End	Lat	Long	H2O	Species	Est SCL	Comments
Kings Bay										
3/8/07 - 3/19/07	Bayport									
3/16/2007	Bayport	27	2035	31	30° 42.60	81° 23.20	17.4	C. caretta	67cm	Fresh dead, plastron intact (48cm long), carapace mostly missing. Most internal organs/viscera missing. Head (12.5cm wide) and 4 flippers intact.

Project	Dredge	Year	Date	Time	Load	Latitude / Longitude	Surface Temp (°C)	Species sighted	Number sighted	Comments
Kings Bay Ent. Channel	Glen Edwards	2007	02/06/07	825	2	30°33.76 / 81°18.05	13	Eubalaena glacialis	2	Sighted 1 adult and 1 probable calf. Estimated length of whale - 40ft, black in color. Behavior did not appear to be bothered by dredge.
			02/07/07	1400	8	30°36.157 / 81°18.925	13	Eubalaena glacialis	3	Sighted pectoral fins and fluke, blew several times. Estimated at 45ft, black in color. Behavior did not appear to be effected by dredge.
			02/10/07	1739	22	30°35.585 / 81°18.776	13	Eubalaena glacialis	2	Blew two times, observed pectoral fin slap. Both appeared 40-45ft, black in color. Behavior not effected by dredge.
			02/11/07	1305	25	30°35.69 / 81°18.890	13	Eubalaena glacialis	2	Observed rolling and pectoral fin slaps, 40-45ft in length and black in color. Behavior not effected by dredge
			02/12/07	1720	29	30°42.681 / 81°22.7	13	Eubalaena glacialis	2	Observed pectoral fins and flukes. Whales 40-45ft, 16-20ft in length, both black. Mother/calf pair.